

Mobile Food Preparation Vehicles



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Why it Matters

LIVE



Lakeville May, 2015



Code Development History

- NFPA 96 technical committee
- NFPA 96 2017 edition
 - **Annex B**
- NFPA 96 2021 edition
 - **Annex B language moved into body of the standard**
- IFC 2018 edition
 - **Section 319**
 - **No changes in 2021 IFC**
 - **Changes could occur in the 2024 IFC**

City to City Inspections

- Are you issuing operational permits?
 - **Section 105.6.30**
- Do you have a city ordinance?
 - **More or less restrictive than MSFC?**
- No SFMD approval process
- Should one city's approval apply to the next city?

Definition

- Vehicles that contain cooking equipment that produce smoke or grease-laden vapors for the purpose of preparing and serving food to the public.
- Private recreation vehicles are not considered mobile food preparation vehicles.



Kitchen Exhaust Hood

- A Kitchen Exhaust hood is required where the cooking appliances or operation create grease laden vapors
- The kitchen exhaust hood must meet the requirements of MSCF Section 607



Kitchen Exhaust Hood

Commercial kitchen exhaust hoods shall comply with the requirements of the International Mechanical Code.

- Type I Hood
- Type II Hood



MSFC SECTION 607.1

Cooking Operations

Class 1 Cooking Operation

- Commercial Operation
 - Type I hoods are required for cooking operations that produce grease laden vapors
-
- Ranges
 - Stoves
 - Induction cookers
 - Hot plates
 - Electric frying pans
 - Conveyor ovens when used for meat
 - Braising pans
 - Char broilers
 - Woks
 - Griddles
 - Deep fat fryers
 - Broilers
 - Pan frying
 - barbeque
 - Rotisseries
 - Equipment designed by the manufacturer to produce grease

Cooking Operations

Class 2 Cooking Operations

- Equipment or process that produces significant steam or heat but does not product grease-laden vapors.
 - Type II Hood

Class 3 Cooking Operations

- Equipment or process that equivalent to residential cooking

Class 4 Cooking Operations

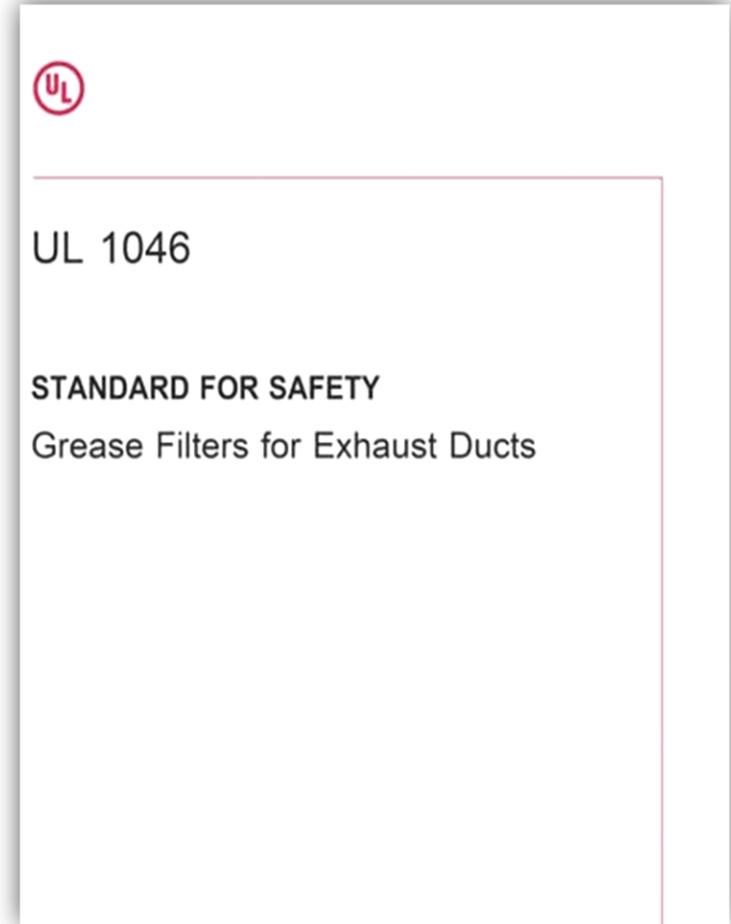
- Enclosed equipment - own grease filtering and suppression

Class 5 Cooking Operations

- Room Ventilation is adequate

Ventilation System

The ventilation system in connection with hoods shall be operated at the required rate of air movement, and grease filters listed and labeled in accordance with UL 1046 shall be in place where equipment under a kitchen grease hood is used.



Grease Extractors

Where grease extractors are installed, they shall be operated when the commercial-type cooking equipment is used.



Fire Protection

Cooking equipment shall be protected by automatic fire extinguishing systems in accordance with Section 904.12

dance with Section 903.4.1.

904.11.2.2 Alarms. Alarms shall be provided as required for *automatic sprinkler systems* in accordance with Section 903.4.2.

904.11.2.3 Floor control valves. Floor control valves shall be provided as required for *automatic sprinkler systems* in accordance with Section 903.4.3.

904.11.3 Testing and maintenance. *Automatic water mist systems* shall be tested and maintained in accordance with Section 901.6.

904.12 Commercial cooking systems. The automatic fire-extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust systems of the type and arrangement protected. Preengineered automatic dry- and wet-chemical extinguishing systems shall be tested in accordance with UL 300 and *listed* and *labeled* for the intended application. Other types of automatic fire-extinguishing systems shall be *listed* and *labeled* for specific use as protection for commercial cooking operations. The system shall be installed in accordance with this code, NFPA 96, its listing and the manufacturer's installation instructions. Automatic fire-extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

1. Carbon dioxide extinguishing systems, NFPA 12.
2. *Automatic sprinkler systems*, NFPA 13.
3. Automatic water mist systems, NFPA 750.
4. Foam-water sprinkler system or foam-water spray systems, NFPA 16.

arranged to give uniform distribution shall be installed within vertical ducts exceeding 20 feet (6096 mm) and horizontal ducts exceeding 50 feet (15 240 mm). Dampers shall be installed at either the top or the bottom of the duct and shall be arranged to operate automatically upon activation of the fire-extinguishing system. Where the damper is installed at the top of the duct, the top nozzle shall be immediately below the damper. Automatic carbon dioxide fire-extinguishing systems shall be sufficiently sized to protect all hazards venting through a common duct simultaneously.

904.12.3.1 Ventilation system. Commercial-type cooking equipment protected by an automatic carbon dioxide extinguishing system shall be arranged to shut off the ventilation system upon activation.

904.12.4 Special provisions for automatic sprinkler systems. *Automatic sprinkler systems* protecting commercial-type cooking equipment shall be supplied from a separate, indicating-type control valve that is identified. *Access* to the control valve shall be provided.

904.12.4.1 Listed sprinklers. Sprinklers used for the protection of fryers shall be tested in accordance with UL 199E, *listed* for that application and installed in accordance with their listing.

904.12.5 Operations and maintenance. Automatic fire-extinguishing systems protecting commercial cooking systems shall be maintained in accordance with Sections 904.12.5.1 through 904.12.5.3.

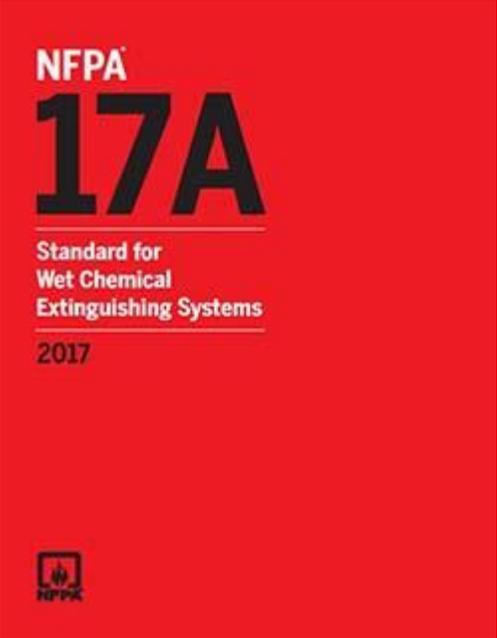
904.12.5.1 Existing automatic fire-extinguishing systems. Where changes in the cooking media, positioning



Fire Protection

The automatic fire extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust systems of the type and arrangement protected.

- Known as Pre-engineered systems
- UL 300 for modern kitchens
- Wet Chemical is most common
- Per MSFC 904.5 Installed per the 2017 edition of NFPA 17A
- Installed per manufacturers installation manual

The image shows the cover of the NFPA 17A standard. It features the NFPA logo at the top left, followed by the large number '17A'. Below this, the text reads 'Standard for Wet Chemical Extinguishing Systems' and '2017'. At the bottom left, there is a small NFPA logo.

NFPA
17A
Standard for
Wet Chemical
Extinguishing Systems
2017

Fire Protection- Manual Activation

A manual activation device is required near the means of egress
In a Mobile food preparation vehicle it should be placed on the door exiting the cooking area to the outside of the vehicle.

- Not less than 10 feet and not more than 20 feet from the hood
- 42" to 48" mounting height
- Clearly identify the protected hazard
- 40 maximum pull pressure

HOOD#1

**REMOTE
PULL STATION
FOR HOOD
FIRE SUPPRESSION
SYSTEM**



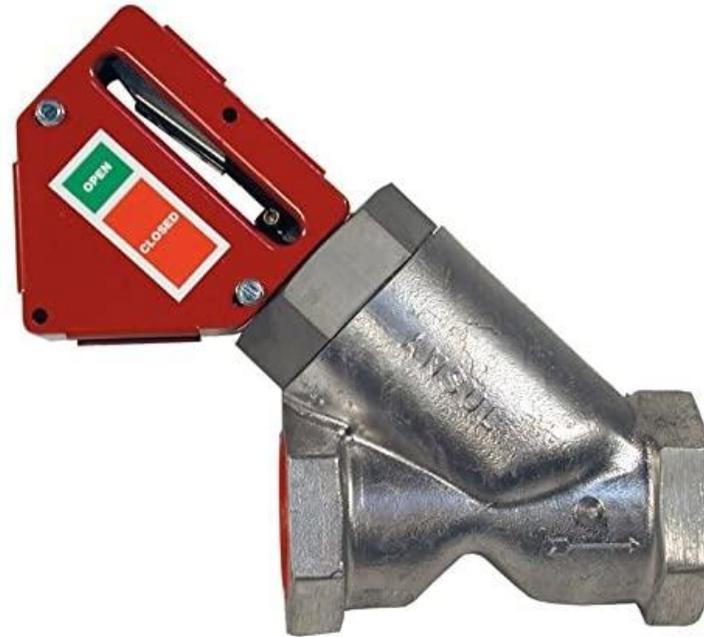
Fire Protection- Interconnection

The actuation of the fire extinguishing system must automatically shut down the fuel or electrical power supply to the cooking equipment.

- Manual fuel and electrical supply reset required



Electric Shunt Trip



Mechanical Gas Valve

Fire Protection- Fire Extinguishers



Portable fire extinguishers shall be provided in accordance with Section 906.4

Fire Protection- Fire Extinguishers

Fire extinguishers provided for the protection of cooking equipment shall be of an approved type compatible with the automatic fire-extinguishing system agent.

Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K-rated portable extinguisher



Fire Protection- Fire Extinguishers

Solid fuel cooking

whether or not under a hood with a fire box 5 Cubic Feet or less require a single 2.5 or two 1.5 gallon class K extinguishers.

Deep fat frying

- Up to 4 fryers (80 lb. max capacity) require One 1.5 gallon class K extinguisher
- Each additional 4 fryers (80 lb. max capacity) require an additional 1.5 gallon extinguisher
- Individual fryers exceeding 6 square feet must be installed per the manufactures recommendations

Fuel Supply Piping- General

- Gas cooking appliances shall be secured in place and connected to fuel-supply piping with an appliance connector complying with ANSI Z21.69/CSA 6.16

ANSI Z21.69/CSA 6.16

(Connectors for movable gas appliances)

- Connector construction and materials
- Markings
- Performance
- Durability



Stationary-home



Stationary-commercial



Movable

Photo: All Points Food Service

MSFC SECTION 319.5

Fuel Supply Piping

- The connector installation shall be configured in accordance with the manufacturer's installation instructions
- Movement of appliances shall be limited by restraining devices installed in accordance with the connector and appliance manufacturers' instructions



Photo: All Points Food Service

Cooking Oil Storage

Containers for cooking oil storage cannot exceed 120 gallons and need to be stored securely during transport.

Tanks for cooking oil storage must comply with sections 319.7.1 through 319.7.5.2



Cooking Oil Storage

Nonmetallic Storage Tanks

- Max capacity of 200 gallons
- Listed for high heat
- Installed per manufactures instructions

Metallic Oil Storage Tanks

- No limit
- Listed UL 80 or UL 142



Cooking Oil Storage

Oil transfer System Components

- Include but not limited to piping connections, fittings, valves, tubing, hoses, pumps, vents, and other components used in the transfer of cooking oil.

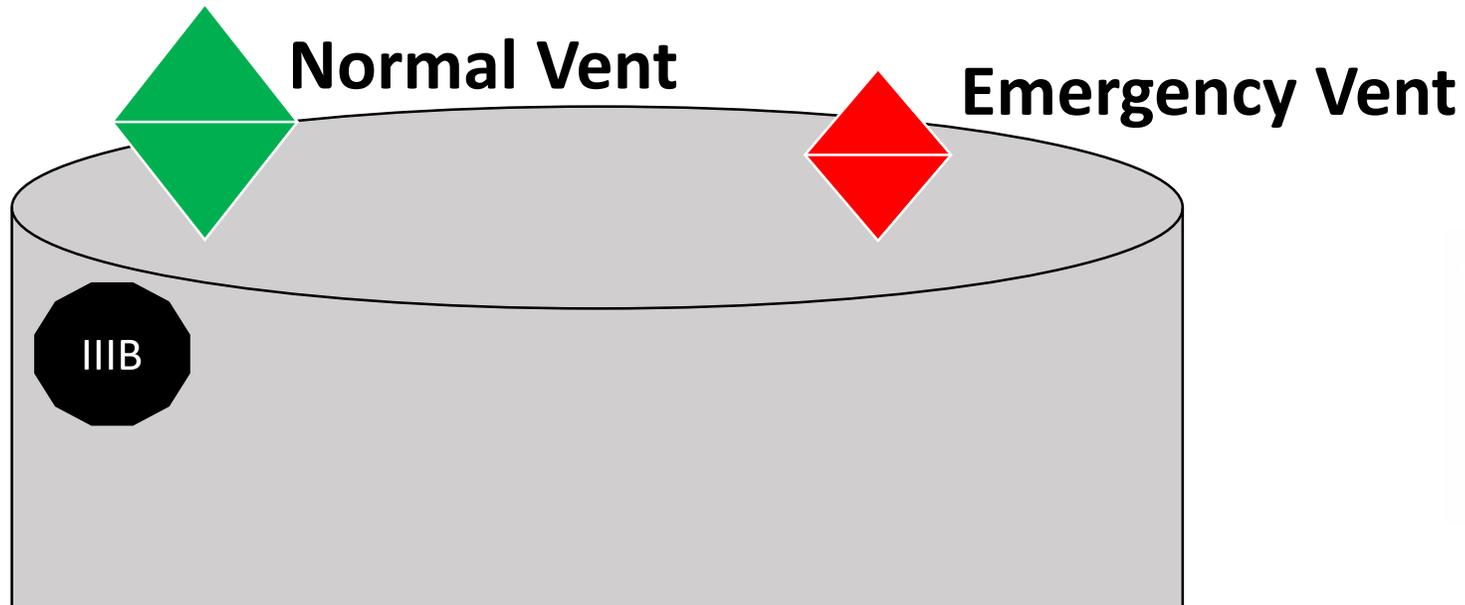
Design, fabrication, and assembly of system components

Suitable for:

- Working pressures
- Temperatures
- Structural stresses

Cooking Oil Storage - Venting

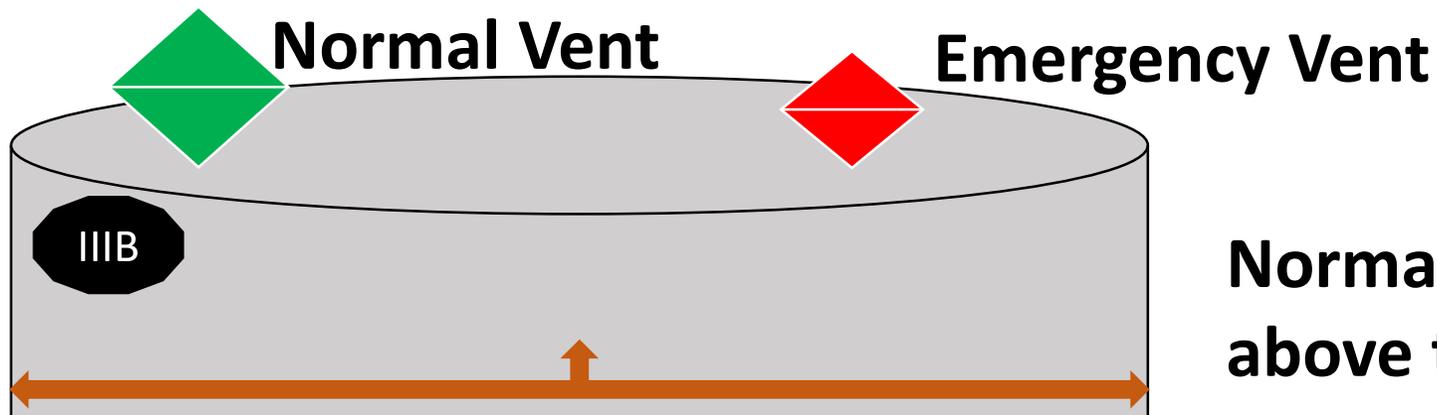
Both normal and emergency vents must be installed on cooking oil storage tanks



Cooking Oil Storage

Normal vents

- Located above the normal fill line
- Must be as large as the largest filling or withdrawal connection
- Not required to vent to the exterior
 - 5704.2.7.3.3 vent must be a normally closed type

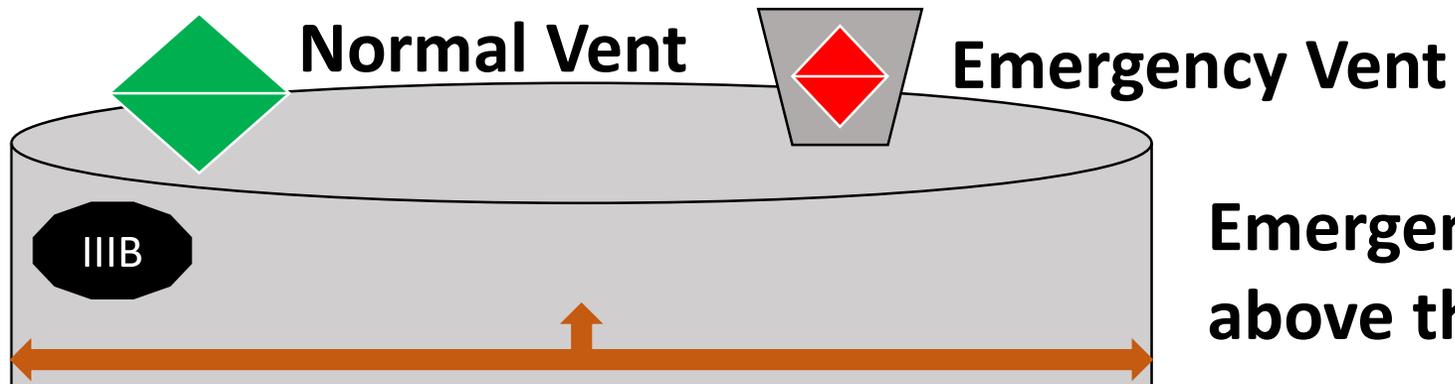


Normal vents must be located above the normal fill line

Cooking Oil Storage

Emergency vents

- Located above the normal fill line
- Designed to relieve excess internal pressure
- Not required to vent to the exterior
- Non Metallic Tanks are allowed to use the tank construction in creating a relief vent.



Emergency vents must be located above the normal fill line

LP Gas



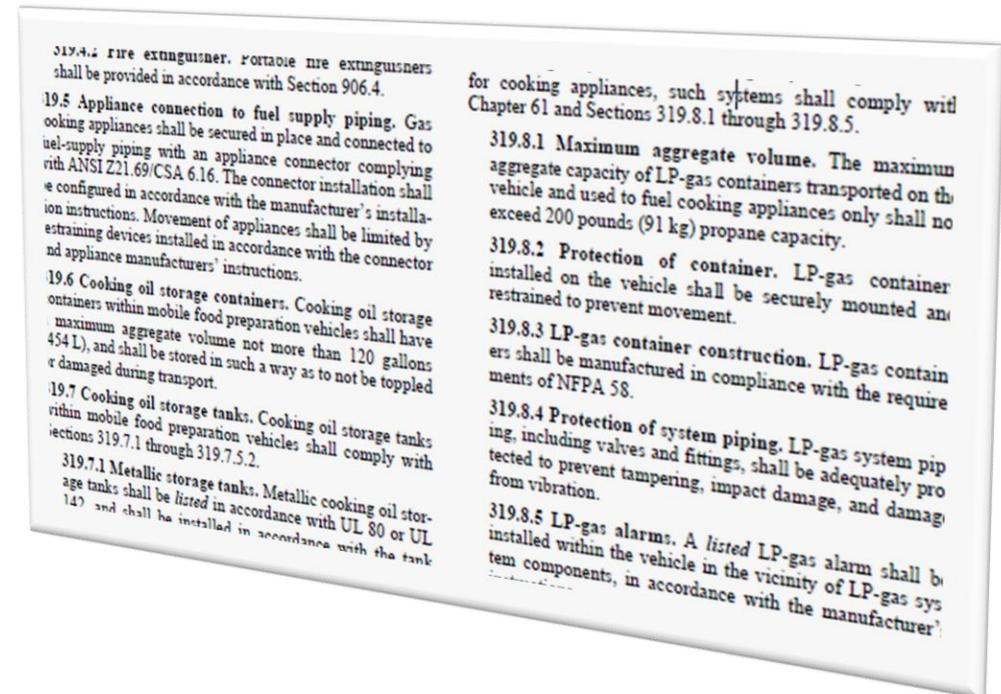
<https://www.insideedition.com/investigative/9269-food-truck-mania-is-there-a-hidden-danger>

Cooking Fuel - LP Gas

LP Gas Must comply with:

- MSFC sections 319.8.1 through 319.8.5
- NFPA 58
- Chapter 61

- Total aggregate volume
- Container protection
- Container construction
- System Piping
- Alarms



Cooking Fuel – LP Gas

Maximum aggregate volume

The maximum aggregate capacity of LP-gas containers transported on the vehicle and used to fuel cooking appliances.

- cannot exceed 200 pounds propane capacity.



Approximate Dimensions 48" - 50" high x 15"-18" diameter

Cooking Fuel – LP Gas

Protection of container

LP-gas containers installed on the vehicle must be:

- Securely mounted
- Restrained to prevent movement

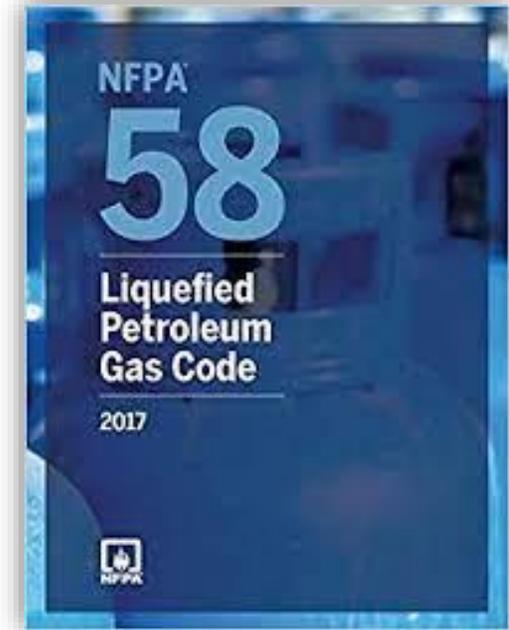


Cooking Fuel – LP Gas

LP-gas container construction

LP-gas containers shall be manufactured in compliance with the requirements of NFPA 58.

- Chapter 9 Vehicular Transportation of LP Gas



Cooking Fuel – LP Gas

Protection of system piping

LP-gas system piping, including valves and fittings:

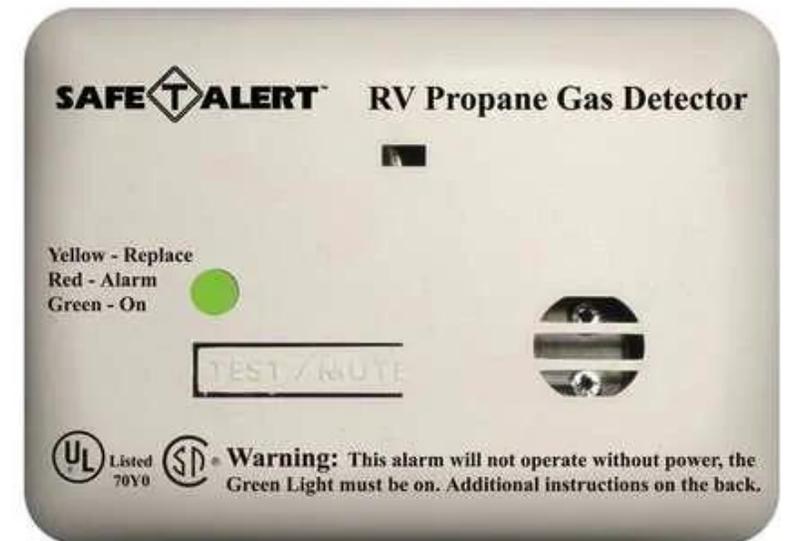
- Adequately protected to prevent tampering,
- Impact damage
- Damage from vibration.

Cooking Fuel – LP Gas

LP-gas alarms

- Listed
- Installed within the vehicle in the vicinity of LP-gas system components,
- Installed in accordance with the manufacturer's instructions.

A UL 2075 (Standard for Safety Gas and Vapor Detectors and Sensors)
Listed device is advised



Cooking Fuel Comparison

CNG Gas Vs. Propane

- Slightly Safer because it is lighter than air and dissipates quicker
- Propane delivers higher BTU's for the money
- Propane is readily available
- Both are considered clean burning fuels
- Using propane appliances requires a conversion or special regulator

Cooking Fuel – CNG Gas

Compressed Natural Gas (CNG) applications must comply with section 319.9.1 through 319.9.4

- CNG Containers
- Maximum Volume
- Container Protection
- Container Construction
- CNG for cooking and vehicle power
- System Piping
- Alarms



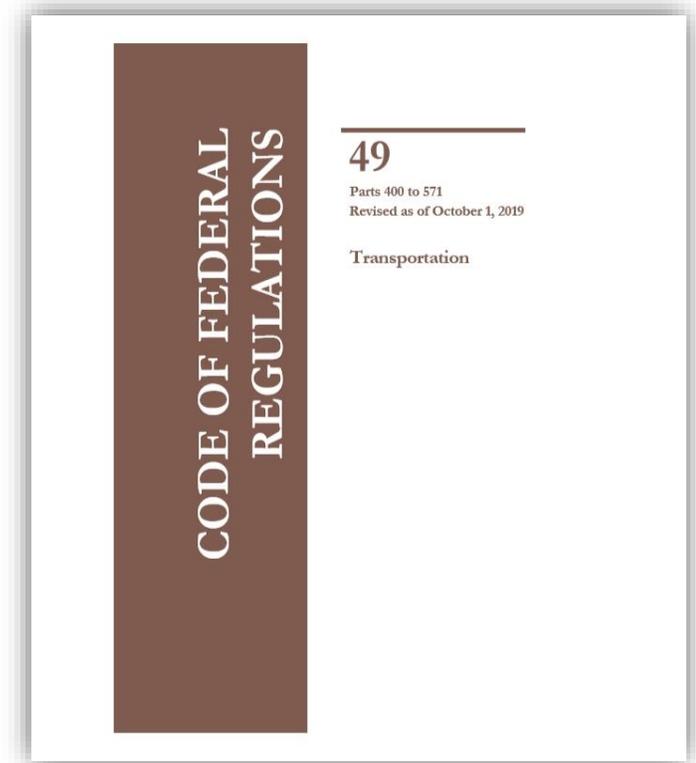
Cooking Fuel – CNG Gas

- Maximum volume CNG allowed on a vehicle is 1300 pounds
- CNG containers must be securely mounted and restrained to prevent movement.
- Containers shall not be installed in locations subject to a direct vehicle impact.



Cooking Fuel – CNG Gas

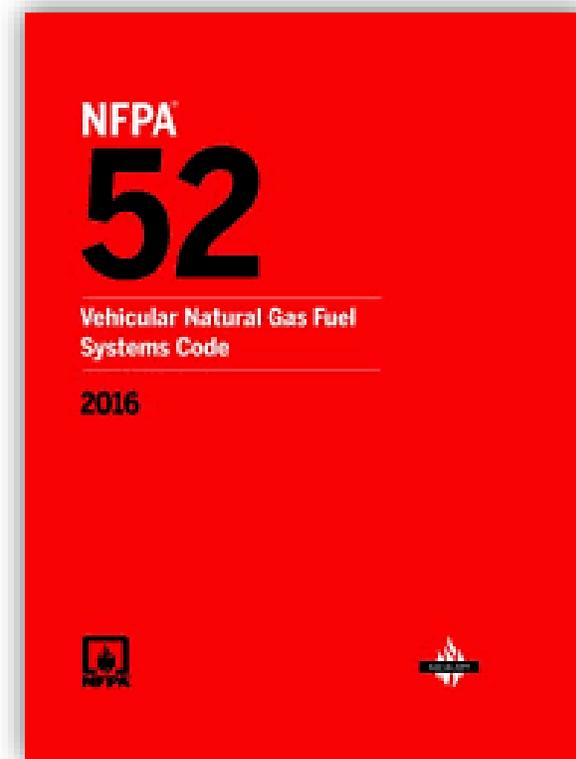
- CNG Tank must be an NVG-2 type cylinder
 - Must meet 49 CFR 571.304 (requirements for CNG Fuel container integrity)
 - Type 1-4 Metallic and Composite
 - Subject to a burst test
 - Subject to a Bonfire test
 - Requires Labeling
 - Hydrostatically tested to 125% of service pressure



Cooking Fuel – CNG Gas

CNG Containers that supply both vehicle fuel and cooking fuel must be installed per the 2016 edition of NFPA 52 (Vehicular Natural Gas Fuel Systems)

- Piping system design, materials, and components
- Piping inspection, testing, system leak check, and purging
- Minimum safe performance criteria, general requirements, and specifications for venting combustion products.



Cooking Fuel – CNG Gas

CNG Gas system piping including valves and fittings must be protected against tampering and damage and vibration.



Photo by United Food Truck - UFT

Cooking Fuel – CNG Gas

A listed methane gas alarm shall be installed within the vehicle in accordance with manufacturer's instructions.

A UL 2075 (Standard for Safety Gas and Vapor Detectors and Sensors)
Listed device is advised



Macurco Series GD-6 Gas Detector

General Maintenance

Maintenance on systems in mobile food preparation vehicles must be in accordance with sections 319.10.1 through 319.10.3

Includes:

- Hood maintenance requirements from Section 607
- Fire suppression system maintenance from Section 901
- Annual inspections of fuel gas piping systems

Exhaust System– Maintenance

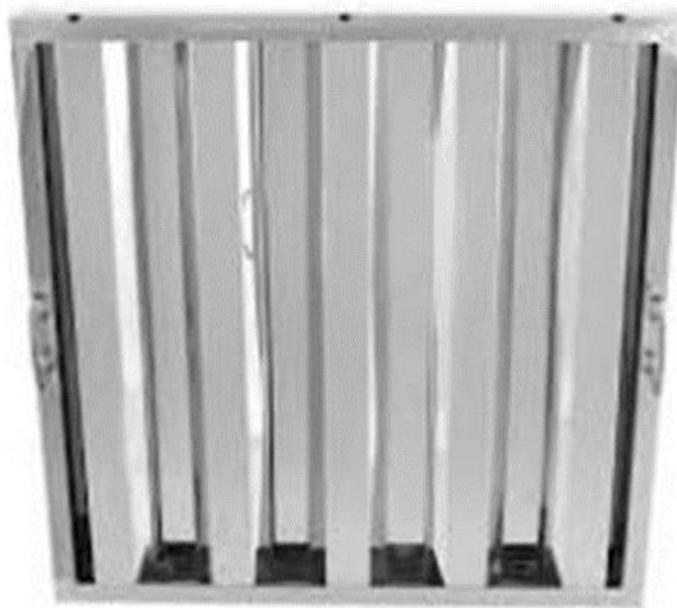
Maintenance on Exhaust System

The exhaust system, including hood, grease-removal devices, fans, ducts and other appurtenances, shall be inspected and cleaned in accordance with Section 607.3.



Exhaust System– Maintenance

Ventilation System The ventilation system in connection with hoods shall be operated at the required rate of air movement, and grease filters listed and labeled in accordance with UL 1046 shall be in place where equipment under a kitchen grease hood is used.



Exhaust System– Maintenance

Ventilation System Inspection and Cleaning

Inspections are required based on the volume of cooking being performed.

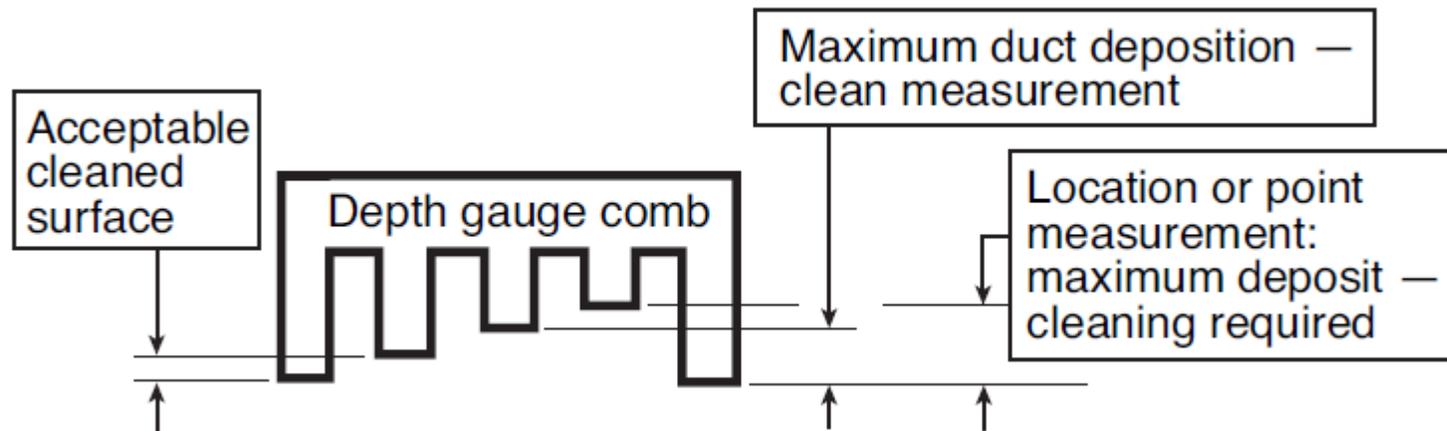
Type of Cooking Operations	Frequency of Inspection
High-volume cooking operations such as 24- hour cooking, charbroiling or wok cooking	3 Months
Low-volume cooking operations such as places of religious worship, seasonal businesses and senior centers	12 Months
Cooking operations utilizing solid fuel-burning cooking appliances	1 Month
All other cooking operations	6 Months

Exhaust System– Maintenance

50 Microns (.001 inches) - Acceptable

2000 Microns (.078 inches)- Cleaning is required

3175 Microns (1.25 inches) - Critical grease depth



Exhaust System– Maintenance



Acceptable 50 microns or less



Cleaning Depth 2000 microns or less

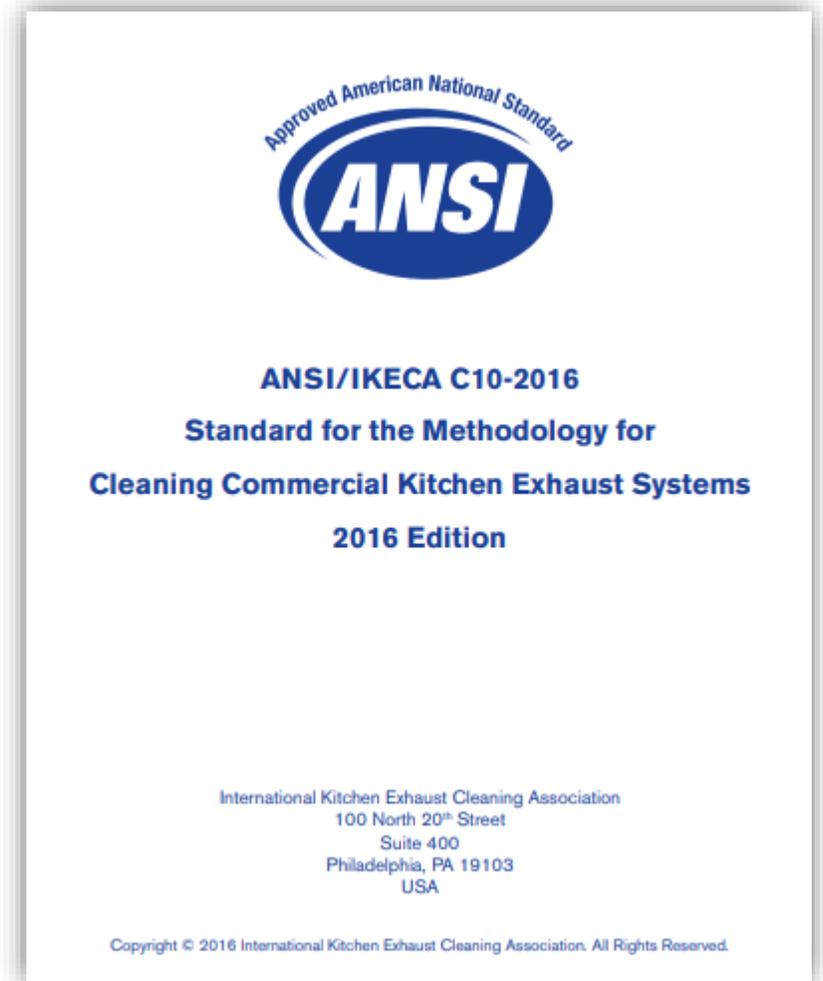


Critical Depth 3175 Microns or more

Exhaust System– Maintenance

MSFC 607.3.3.2 Grease Accumulation

If during the inspection it is found that hoods, grease-removal devices, fans, ducts or other appurtenances have an accumulation of grease, such components shall be cleaned in accordance with ANSI/IKECA C10.



Exhaust System– Maintenance

Tags. When a commercial kitchen hood or duct system is inspected a tag provided in a conspicuous location containing the:

- service provider name
- address
- telephone number
- date of service

Prior tags shall be covered or removed

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	DO NOT REMOVE										17
2	CERTIFICATE OF PERFORMANCE										18
3	ACCESSIBLE AREAS OF THIS EXHAUST SYSTEM HAVE BEEN:										19
4	<input type="checkbox"/> INSPECTED <input type="checkbox"/> CLEANED										20
5	IN ACCORDANCE WITH IKECA AND NFPA 96 STANDARDS										21
6	<input type="checkbox"/> FOR ADDITIONAL INFORMATION, INCLUDING AREAS NOT CLEANED, REFER TO APPLICABLE SYSTEM SERVICE REPORT										22
7	Next Service Due: _____										23
8											24
9											25
10	Company Name										26
11	Street Address										27
12	City, State, Zip										28
13	(888) 888-8888										29
14											30
15	TECHNICIAN NAME AND CERTIFICATION #										31
16	2013	2014	2015	2016	2017						

Fire Protection Systems– Maintenance

Fire protection systems and devices

Fire protection systems and devices shall be maintained in accordance with Section 901.6.

901.6 Fire Protection must be maintained in an operable condition at all times.

- Wet Chemical cylinders outside when cold



Armed or Disarmed Visual Identification



Fire Protection Systems– Maintenance

MSFC Section 901.6.1

**NFPA 17A
Section 7**

MSFC Section 319.10.2

**TABLE 901.6.1
FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS**

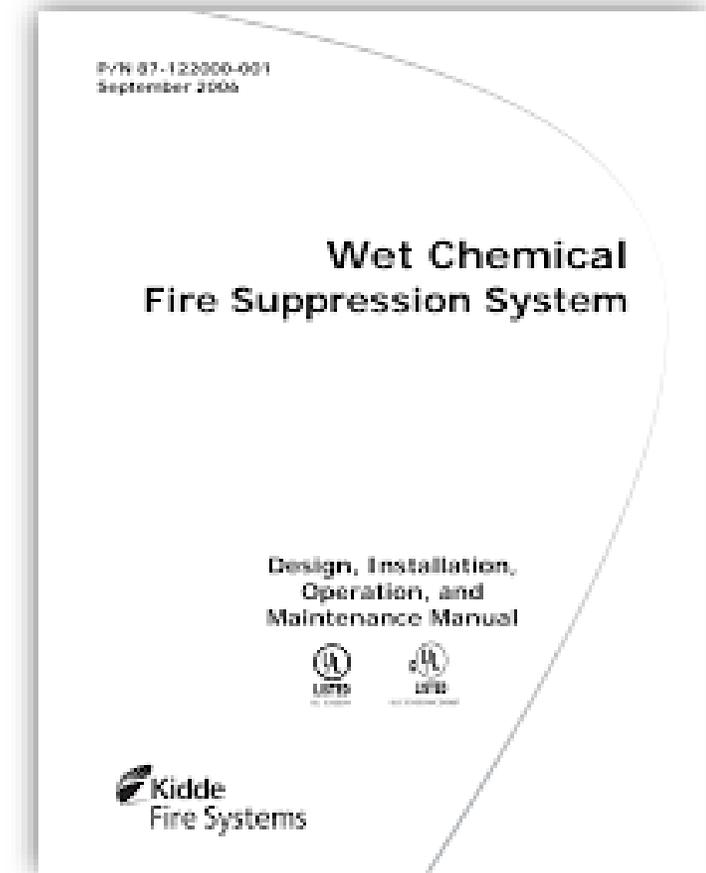
SYSTEM	STANDARD
Portable fire extinguishers	NFPA 10
Carbon dioxide fire-extinguishing system	NFPA 12
Halon 1301 fire-extinguishing systems	NFPA 12A
Dry-chemical extinguishing systems	NFPA 17
Wet-chemical extinguishing systems	NFPA 17A

MSFC SECTION 901.6.1

Fire Protection Systems– Technician Qualifications

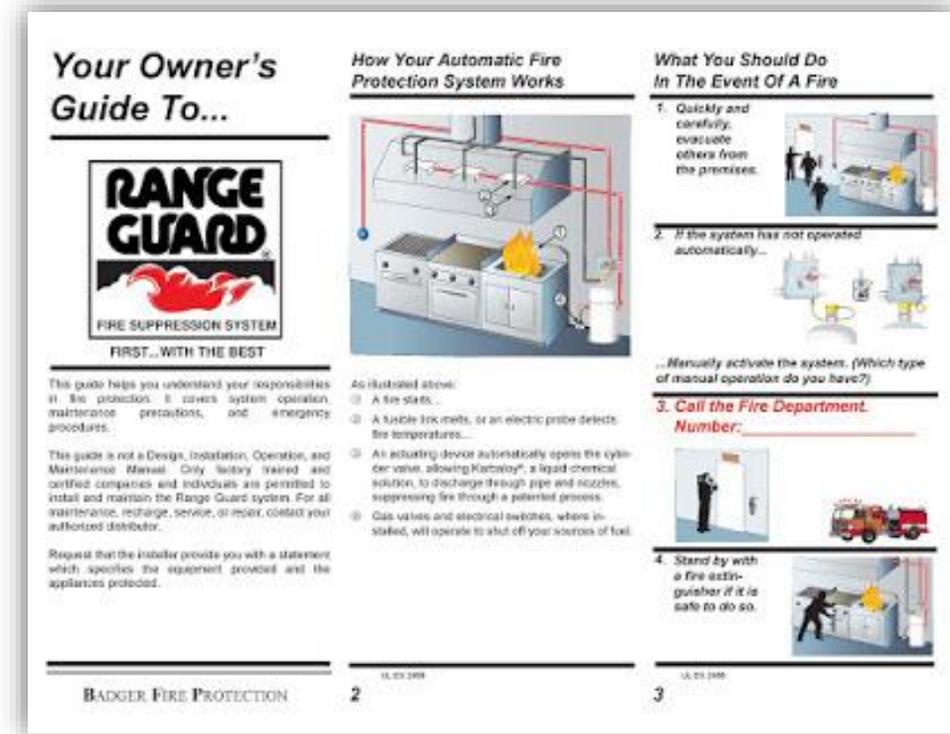
Technicians that perform testing, inspections, and maintenance are to :

- Be trained and certified including passing a written or online test (typically by the manufacturer) that is acceptable by the AHJ
- Possess a document confirming certification
- Have availability to applicable manufacturer installation and service manuals as well as relevant technical bulletins



Fire Protection Systems– Inspection Intervals

- Inspections and maintenance is the responsibility of the system owner and monthly the owner must do a visual inspection.
- At least semiannually and after any system activation maintenance shall be conducted in accordance with the manufacturer's design, installation, and maintenance manual.



Fire Protection Systems– Inspection Requirements

1. Check to see that the hazard has not changed
2. An examination of all detectors, the expellant gas container(s), the agent container(s), releasing devices, piping, hose assemblies, nozzles, signals, all auxiliary equipment, and the liquid level of all non-pressurized wet chemical containers
3. Verification that the agent distribution piping is not obstructed

Fire Protection Systems– Deficiencies

During inspection the technician looks for corrosion and pitting in the cylinders as well as structural damage and fire damage where these are found the cylinder or component is considered compromised or deficient.

- If deficiencies are found in the tank then it must be hydro-tested or replaced.
- If deficiencies are found in the system components then they need to be replaced.

Fire Protection Systems– Link Replacement

Fixed temperature-sensing elements of the fusible metal alloy–type or glass bulb–type shall be replaced at least semiannually from the date of installation or more frequently, if necessary, and shall be destroyed when removed.



Replacement date must be put on the service tag

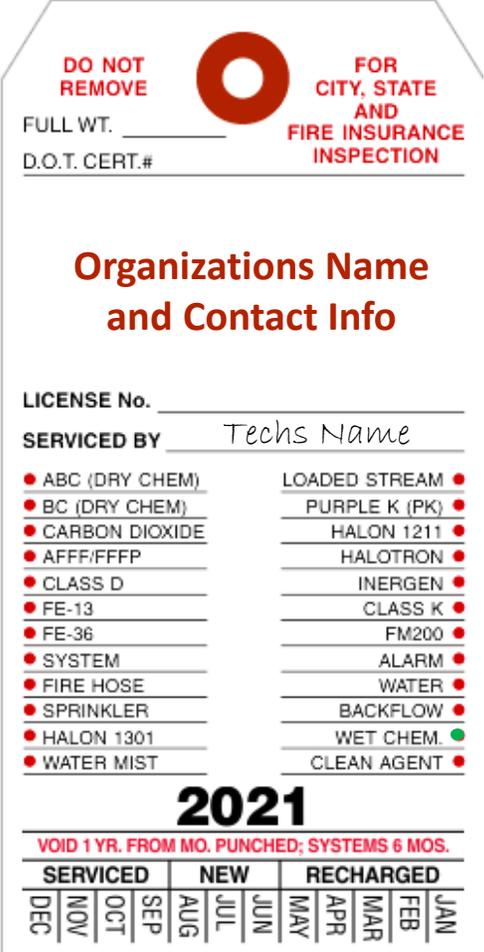
Fire Protection Systems– Documentation

Inspection reports including recommendations must be:

- Provided to the owner or owners representative
- Kept for the period of one year

Inspection Tags or Labels must:

- Indicate the month and year the maintenance is performed and identifying the person performing the service.
- Be firmly affixed or in a location it will remain until next service
 - Only the current tag or label shall remain in place



DO NOT REMOVE

FOR CITY, STATE AND FIRE INSURANCE INSPECTION

FULL WT. _____

D.O.T. CERT.# _____

Organizations Name and Contact Info

LICENSE No. _____

SERVICED BY Techs Name

<input type="checkbox"/> ABC (DRY CHEM)	<input type="checkbox"/> LOADED STREAM
<input type="checkbox"/> BC (DRY CHEM)	<input type="checkbox"/> PURPLE K (PK)
<input type="checkbox"/> CARBON DIOXIDE	<input type="checkbox"/> HALON 1211
<input type="checkbox"/> AFFF/FFFP	<input type="checkbox"/> HALOTRON
<input type="checkbox"/> CLASS D	<input type="checkbox"/> INERGEN
<input type="checkbox"/> FE-13	<input type="checkbox"/> CLASS K
<input type="checkbox"/> FE-36	<input type="checkbox"/> FM200
<input type="checkbox"/> SYSTEM	<input type="checkbox"/> ALARM
<input type="checkbox"/> FIRE HOSE	<input type="checkbox"/> WATER
<input type="checkbox"/> SPRINKLER	<input type="checkbox"/> BACKFLOW
<input type="checkbox"/> HALON 1301	<input checked="" type="checkbox"/> WET CHEM.
<input type="checkbox"/> WATER MIST	<input type="checkbox"/> CLEAN AGENT

2021

VOID 1 YR. FROM MO. PUNCHED; SYSTEMS 6 MOS.

SERVICED			NEW			RECHARGED					
DEC	NOV	OCT	SEP	AUG	JUL	JUN	MAY	APR	MAR	FEB	JAN

Fire Protection Systems– Additional Information

NFPA 17A has many more sections applicable to maintenance including sections:

- 7.3.4 fixed temperature sensing elements
- 7.4 Recharging
- 7.5 Hydrostatic testing
- 7.6 Cylinder collars



Typical Service Collar

Cooking Fuel – Maintenance

LP Fuel Gas Systems

LP-gas containers installed on the vehicle and fuel-gas piping systems shall be inspected annually:

- By an approved inspection agency or a company that is registered with the U.S. Department of Transportation to requalify LP-gas cylinders to ensure:
 - It is free from damage
 - Suitable for service
 - Not leaking



Cooking Fuel – Maintenance

CNG Gas Systems

- CNG containers shall be inspected every 3 years in a qualified service facility to ensure:
 - containers are not used past their expiration date listed on the manufacturers label
- Upon approval the inspection agency must place a tag or sticker on the fuel gas system indicating its name and the date of the inspection.

**PASSED
CNG CYLINDER
INSPECTION**

This cylinder has passed inspection in accordance with DOT FMVSS 304.

This cylinder must be visually inspected within 36 months, or 36,000 miles, whichever comes first from the date marked. DO NOT use cylinder beyond the expiration date marked on the cylinder.

Cylinder must be re-inspected if overpressured, dropped, impacted, reinstalled on a different vehicle, exposed to excessive heat, fire or harsh chemicals, or if the vehicle is in an accident.

Inspector Name _____
Date of Inspection _____
Inspector Certification # _____
Cylinder Serial # _____

Labels provided by NGVI
www.ngvi.com

Cut out date of inspection month/year.

JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC
16 17 18 19 20 21

Additional Information



Mobile Food Unit

PLAN REVIEW, LICENSING AND SAFE OPERATION

Definition of MFU

A mobile food unit (MFU) is a food and beverage service establishment that is a vehicle mounted unit, either:

- Motorized or trailered, operating no more than 21 days annually at any one place, or operating more than 21 days annually at any one place with the approval of the regulatory authority.

OR

- Operated in conjunction with a permanent business licensed under Minnesota Statutes, chapters 157 or 28A at the site of the permanent business by the same individual or company, and readily movable, without disassembling, for transport to another location.

How to get started

Food and beverage establishments in Minnesota are licensed by different agencies. The establishment's menu and location of operation determines which agency is responsible for plan review and licensing. To find out which agency is responsible, see the [Licensing](#) website. Contact the appropriate agency to discuss your business plan, plan review and licensing requirements, and obtain applications.

Safe operation

Employee health and hygiene

Employees who have been ill with vomiting and/or diarrhea cannot work in a food establishment for at least 24 hours after their symptoms end.

Handwashing

Handwashing is the single most effective means of preventing the spread of bacteria and viruses, which can cause foodborne illness.

- Ensure your handwashing sink is set up before you begin food preparation. Make it easily accessible to all employees and use it only for handwashing.
- Handwashing sinks need running water, soap, disposable towels and a trash container.
- Wash hands often. It is important to wash your hands before working with food, clean equipment and utensils; after smoking, eating or drinking, or using toilet facilities; or any time hands become contaminated.

Preventing bare hand contact

Prevent bare hand contact with ready-to-eat food by wearing disposable gloves or using utensils, deli tissue, spatulas, tongs or other dispensing equipment.

MOBILE FOOD UNIT

Approved sources

Obtaining food, beverages and ice from approved sources is the first step in ensuring safe food for your customers.

- Prepare food in the MFU or if you need to prepare food in advance contact your inspector to discuss off site preparation.
- Food cannot be prepared or stored in a home.
- Water must be from an approved source. Some approved sources are a public water supply system or commercially bottled drinking water.

Clean and separate

Cleaning and sanitizing

Contaminated equipment is one common cause of foodborne illness. Provide three containers of sufficient size to wash, rinse and sanitize equipment.

1. **Wash** in hot, soapy water.
2. **Rinse** in clean water.
3. **Sanitize** in chemicals.

Use approved chemical sanitizers such as chlorine bleach, quaternary ammonium or iodine. Always follow label instructions. Use the required sanitizer solution strength and contact time. Use a test kit to verify the sanitizer concentration.

Preventing cross-contamination

Prevent cross-contamination of ready-to-eat food from raw animal food or dirty equipment.

- Store raw meat, poultry and fish below ready-to-eat food.

- Store and handle ice safely. Ice used to cool beverage containers must be drained. Do not re-use this ice in drinks or food preparation.
- Store damp or soiled wiping cloths in an approved sanitizer at the required strength.

Cooking time/temperature control for safety (TCS) food

Cook raw animal food according to the internal [Temperature and Time Requirements](#). These include:

- 165°F for 15 seconds for poultry
- 155°F for 15 seconds for ground meat
- 145°F for 15 seconds for whole muscle meat and fish

Cold and hot holding

Improper holding temperatures and times are one common cause of foodborne illness.

- Maintain cold TCS food at 41°F or below. Frozen food must remain frozen.
- Maintain hot TCS food at 135°F or above.

Resources

[Minnesota Department of Health Food Business Safety](#)
(www.health.state.mn.us/foodbizsafety/)

[Licensing](#)
(www.health.state.mn.us/communities/environment/food/license/index.html)

[Temperature and Time Requirements for Food](#)
(www.health.state.mn.us/communities/environment/food/docs/fs/timetemps.pdf)

[Mobile Food Unit, Seasonal Temporary Food Stand and Seasonal Permanent Food Stand Construction Guide](#)
(www.health.state.mn.us/communities/environment/food/docs/license/mobseconstgd.pdf)

Minnesota Department of Health
Food, Pools, and Lodging Services
PO Box 64975
St. Paul, MN 55164-0975
651-201-4500
health.foodlodging@state.mn.us
www.health.state.mn.us

Minnesota Department of Agriculture
Food and Feed Safety Division
625 Robert Street N
St. Paul, MN 55155-2538
651-201-6027
MDA.FFSD.info@state.mn.us
www.mda.state.mn.us

JANUARY 2019

To obtain this information in a different format, call: 651-201-4500 or 651-201-6000. Printed on recycled paper.

Additional Information

FACT SHEET

FOOD TRUCK SAFETY

NOTE: Inspect all gas systems prior to each use.

NFPA code references are provided at the end of each item. The red keys correspond to the NFPA food truck safety diagram. For more detailed information, see NFPA 1 and Chapter 17 in NFPA 96.

General Safety Checklist

- Obtain license or permits from the local authorities. [21.12.8(a)] **G2**
- Ensure there is no public seating within the mobile food truck. [250.8.1.2] **G2**
- Check that there is a clearance of at least 10 ft away from buildings, structures, vehicles, and any combustible materials. [96.17.2] **G3**
- Verify fire department vehicular access is provided for fire lanes and access roads. [258.2.4] **G4**
- Ensure clearance is provided for the fire department to access fire hydrants and access fire department connections. [213.1.4, 213.1.5] **G5**
- Check that appliances using combustible media are protected by an approved fire-extinguishing system. [96.13.1.2] **G6**
- Verify portable fire extinguishers have been selected and installed in kitchen cooking areas in accordance with NFPA 10. [96.13.3] **G7a**
- When cooking appliances that use solid fuel, such as charcoal or wood, produce grease-laden vapors, make sure the appliances are protected by listed fire-extinguishing equipment. [96.13.7] **G7b**
- Ensure that workers are trained in the following: [96.17.3] **G8**
 - Proper use of portable fire extinguishers and extinguishing systems. [96.17.3.1(1)] **G8a**
 - Proper method of shutting off fuel sources. [96.17.3.1(2)] **G8b**
 - Proper procedure for notifying the local fire department. [96.17.3.1(3)] **G8c**
 - Proper procedure for how to perform simple leak test on gas connections. [96.17.3.1(5)] **G8d**

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FACT SHEET

FOOD TRUCK SAFETY *CONTINUED*

Fuel & Power Sources Checklist

- Verify that fuel tanks are filled to the capacity needed for uninterrupted operation during normal operating hours. [233.34.1.1 for carnivals only] **F1a**
- Ensure that refueling is conducted only during non-operating hours. [96.17.8.1] **F7b**
- Check that any engine-driven source of power is separated from the public by barriers, such as physical guards, fencing, or enclosures. [96.17.5.2.2] **F2**
- Ensure that any engine-driven source of power is shut down prior to refueling from a portable container. [233.35.4] **F3**
- Check that surfaces of engine-driven source of power are cool to the touch prior to refueling from a portable container. **F3a**
- Make sure that exhaust from engine-driven source of power complies with the following: **F4**
 - At least 12 ft in all directions from openings and air intakes. [96.17.5.2.3(1)] **F4a**
 - At least 12 ft from every means of egress. [96.11.13] **F4b**
 - Directed away from all buildings. [96.17.5.2.3(2)] **F4c**
 - Directed away from all other cooking vehicles and operations. [96.17.5.2.3(3)] **F4d**
- Ensure that all electrical appliances, fixtures, equipment, and wiring complies with the NFPA 70. [96.17.11] **F5**

Propane System Integrity Checklist

- Check that the main shutoff valve on all gas containers is readily accessible. [58.5.26.4.3(2)] **P1**
- Ensure that portable gas containers are in the upright position and secured to prevent tipping over. [58.5.26.1.4] **P2**
- Inspect gas systems prior to each use. [96.17.2.2.3] **P3**
- Perform leak testing on all new gas connections of the gas system. [58.5.17] **P4**
- Perform leak testing on all gas connections affected by replacement of an exchangeable container. [58.5.16, 58.5.17] **P5**
- Document leak testing and make documentation available for review by the authorized official. [58.5.25.5.1(M)] **P6**
- Ensure that on gas system piping, a flexible connector is installed between the regulator outlet and the fixed piping system. [58.5.26.5.3(1)] **P7**
- Where a gas detection system is installed, ensure that it is tested monthly. [96.17.2.2] **P8**

Operational Safety Checklist

- Do not leave cooking equipment unattended while it is still hot. (This is the leading cause of home structure fires and home fire injuries.) **DA**

Solid Fuel Safety Checklist (Where Wood, Charcoal, Or Other Solid Fuel Is Used)

- Fuel is not stored above any heat-producing appliance or vent. [96.15.9.2.2] **SA**
- Fuel is not stored closer than 3 ft to any cooking appliance. [96.15.9.2.2] **SB**
- Fuel is not stored near any combustible flammable liquids, ignition sources, chemicals, and food supplies and packaged goods. [96.15.9.2.7] **SC**
- Fuel is not stored in the path of the ash removal or near removed ashes. [96.15.9.2.4] **SD**
- Ash, cinders, and other fire debris should be removed from the firebox at regular intervals and at least once a day. [96.15.9.14.1] **SE**
- Removed ashes, cinders, and other removed fire debris should be placed in a closed, metal container. [96.15.9.13.1] **SF**

Learn More

- Get free digital access to NFPA codes and standards at: nfpacodes.org
- Read the latest news and updates at: nfpa.org/foodtrucksafety
- Review the following and other NFPA resources at: nfpa.org
 - NFPA 1, Fire Code, 2021 Edition
 - NFPA 1, Fire Code Handbook, 2021 Edition
 - NFPA 10, Standard for Portable Fire Extinguishers, 2018 Edition
 - NFPA 56, Liquefied Petroleum Gas Code, 2020 Edition
 - LP Gas Code Handbook, 2020 Edition
 - NFPA 70, National Electrical Code®, 2020 Edition
 - National Electrical Code® Handbook, 2020 Edition
 - NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, 2017 Edition
 - NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations Handbook, 2017 Edition

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Additional Information

**Minnesota Department of Public Safety
State Fire Marshal Division**

Barbecues and Open Flames on Balconies and Patios

Background
Barbecue grills appear on the balconies and patios of multi-family dwellings all year round in Minnesota. The use and storage of solid fuel or propane cooking equipment on patios and balconies has resulted in a number of fires in Minnesota.

In many towns and cities this practice is prohibited by local ordinance or by adoption of Appendix O in the 2020 Minnesota State Fire Code (MSFC). The MSFC does not prohibit barbecue grills on balconies and patios of multi-family occupancies unless the local governing body regulates this by ordinance.

Minnesota State Fire Code Appendix O
Here is the information in Appendix O regarding fires or barbecues on balconies or patios.

- **1.1 Open Flame Prohibited.** In any structure containing three or more dwelling units, no person shall kindle, maintain, or cause any fire or open flame on any balcony above ground level, or on any ground floor patio within 15 feet of a structure.
- **1.2 Fuel Storage Prohibited.** No person shall store or use any fuel, barbecue, torch, or other similar heating or lighting chemical or device in the locations designated in Section 1.1.
- **Exception:** Listed electric or gas-fired barbecue grills that are permanently mounted and wired or plumbed to the building's gas supply or electrical system and that maintain a minimum clearance of 18 inches on all sides, unless listed for lesser clearances, may be installed on balconies and patios when approved by the chief.

Additional information
An option available to local jurisdictions that have not adopted Appendix O is to encourage apartment building owners to incorporate language into their leases that prohibits barbecue grills from being used or stored on balconies and patios.

To determine if an ordinance regulating open fires on balconies or patios has been adopted where you live, contact your local fire marshal or fire department.



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TO BE
UPDATED
BEFORE APRIL
PRESENTATION**



Thank you

MINNESOTA STATE FIRE MARSHAL DIVISION

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